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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,237	04/05/2004	Anatoliy V. Tsyrchanovich	ZIL-519-1C	7465
47713	7590	12/20/2005	EXAMINER	
SILICON EDGE LAW GROUP LLP 6601 KOLL CENTER PARKWAY, SUITE 245 PLEASANTON, CA 94566			LIE, ANGELA M	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/820,237

Applicant(s)

TSYRGANOVICH, ANATOLIY V.

Examiner

Angela M. Lie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-33, 36, 37, 39 and 42 is/are rejected.
- 7) ☒ Claim(s) 34, 35, 38, 40, 41, 43 and 44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 25-33,36,37 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Haferl (US Patent 4906902).

As to claim 25, Haferl discloses a method comprising: generating a sawtooth signal (column 2, lines 61-62), wherein the sawtooth signal has an amplitude (as shown in figure 1 below); generating a correction signal (as indicated in figure 1 below), wherein the correction signal has a vertical retrace time  $t_{vr}$  and a vertical active time  $t_{va}$  (as indicated in figure 1 below); modulating the amplitude of the sawtooth signal using the correction signal to generate a deflection signal (Column 1, lines 5-9); and amplifying the deflection signal to generate a deflection current signal, wherein the deflection current signal is not distorted when the correction signal transitions from the vertical retrace time  $t_{vr}$  to the vertical active time  $t_{va}$  (as shown in figure 1 below).

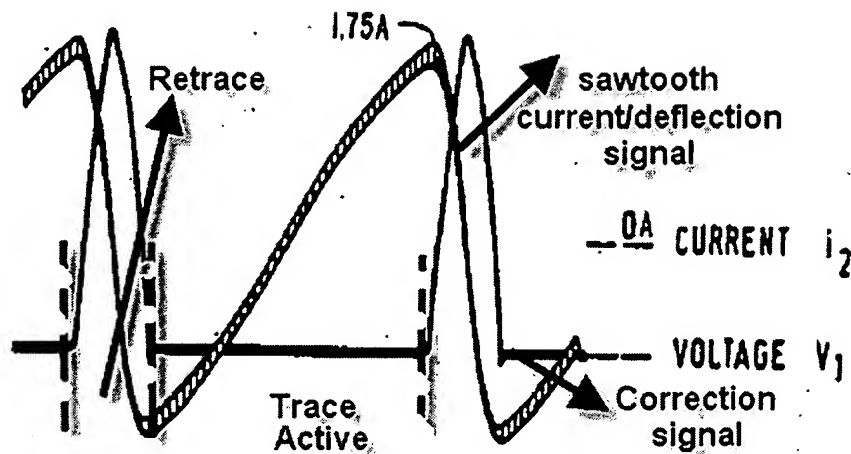


Figure 1

As to claim 26, Haferl discloses the method wherein the generating the correction signal is performed by combining a first correction signal component (Figure 1, element e; column 4, lines 35-43) with a second correction signal component (Figure 1, element f) such that the correction signal has no discontinuities (as shown in figure 1 above, correction signal ( $v_1$ , or Figure 1 element g) is continuous).

As to claim 27, Haferl discloses the method wherein the first correction signal component has a constant amplitude during the vertical active time  $t_{va}$  (as shown in figure 1e, the amplitude of the active time is constant).

As to claim 28, Haferl discloses the method wherein the second correction signal component amplitude during the vertical retrace time  $t_{vr}$  (as shown in figure 1f the amplitude of retrace time remain the same through the signal).

As to claim 29, Haferl discloses the method wherein the first correction signal component has amplitude (as shown in figure 1e, signal has amplitude), and wherein the amplitude of the first correction signal component varies parabolically (Figure 1e parabolic portion of the signal) over a portion of the first correction signal component.

As to claim 30, Haferl discloses the method wherein the sawtooth signal is a horizontal sawtooth signal, and wherein the correction signal is a horizontal correction signal (column 3, lines 38 and 50-51; and as shown in figure 1 above).

As to claim 31, Haferl discloses the method wherein generating the correction signal comprises generating a higher order signal (as shown in figure 1 above or figure 1g, the correction signal contains parabolic shape i.e.  $f(x) = x^2$ , therefore it is a higher order signal).

As to claim 32, Haferl discloses a horizontal deflection generator comprising: a circuit that generates a horizontal sawtooth signal having an amplitude (column 2, lines 61-62; and as shown in figure 1 above); and means for modulating the amplitude (column 1, lines 5-8) of the horizontal sawtooth signal (Figure 1 as indicated above) using a horizontal correction signal (Figure 1 as indicated above) to generate a horizontal deflection current signal, wherein the horizontal correction signal has a vertical active time  $t_{va}$  and a vertical retrace time  $t_{vr}$  (Figure 1 as indicated above), and wherein the horizontal deflection current signal is not distorted after a transition from the vertical active time  $t_{va}$  to the vertical retrace time  $t_{vr}$  (Figure 1, as shown above, during the times of transitions deflection current is not distorted).

As to claim 33, Haferl discloses the horizontal deflection generator wherein the horizontal correction signal is a continuous signal (as shown in figure 1 above, the correction signal is continuous).

As to claim 36, Haferl discloses the horizontal deflection generator wherein the horizontal deflection generator is part of a raster display system (since Haferl teaches

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raster distortion corrected deflection circuit, it is inherent that similarly to other display circuitry, horizontal deflection generator is part of a raster display system).

As to claim 37, Haferl discloses the horizontal deflection generator wherein the horizontal deflection generator is implemented on a single integrated circuit device (column 3, lines 41-44).

As to claim 42, Haferl discloses a horizontal deflection generator comprising: a circuit that generates a horizontal sawtooth signal having an amplitude (column 2, lines 61-62; and as shown in figure 1 above); and means for modulating the amplitude of the horizontal sawtooth signal (column 1, lines 5-8) using a horizontal correction signal (Figure 1 as indicated above) to generate a horizontal deflection current signal, wherein the horizontal correction signal does not have any discontinuities (as shown in figure 1, the correction signal does not have any discontinuities).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haferl (US Patent 4906902) in the view of Onozawa et al (US Patent 5019754). Haferl teaches all the limitations disclosed in claim 25, however he does not teach that the circuit includes a level shifter. Onozawa teaches a horizontal deflection circuit comprising level

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shifter in order to adjust input to the transistor. It would have been obvious to one of the ordinary skill in the art during the time the invention was made to incorporate a level shifter to the horizontal deflection circuit taught by Haferl because a level shifter allows to adjust input to the transistor, and therefore it is very useful in cases when the input signal is shifted or as a regular block in operation of the device i.e. being used to adjust the signal in every cycle.

***Allowable Subject Matter***

5. Claims 34,35,38,40,41,43 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

As to claims 38 and 42, the prior art fails to teach the horizontal deflection generator as disclosed in claims 32 and 42 respectively, wherein deflection generator is implemented in software.

As to claims 34 and 44, the prior art fails to teach the horizontal deflection generator as disclosed in claims 32 and 42 respectively, wherein the means comprises an amplifier, wherein the means generates a modulated horizontal sawtooth signal, and wherein the amplifier generates the horizontal deflection current signal by amplifying the modulated horizontal sawtooth signal.

As to claim 35, this claim is allowable by the virtue of its dependency on claim 34.

As to claim 40, the prior art fails to teach the method as disclosed in claim 39, wherein the circuit includes an inverter.

As to claim 41, the prior art fails to teach the method as disclosed in claim 39, wherein the circuit includes a gain controller.

### ***The Prior Art***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US 6459219 discloses a horizontal deflection circuit with dynamic s-correction comprising circuit for generating a sawtooth current/signal and a circuitry for generating a correction circuit.
- US Patent 6605909 discloses a dynamic horizontal linearity correction circuit comprising sawtooth current generating circuit.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Inquiry***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela M. Lie whose telephone number is 571-272-8445. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Angela M Lie



**TUYET VO  
PRIMARY EXAMINER**